TN2 SERIES
WATER CONDITIONERS

Available in Single, Twin, Tri-Plex and Four-Plex Systems

For Commercial & Industrial Applications

Apartment Buildings
Boiler Water Treatment
Car Washes
Commercial Buildings
Condominiums
Factories
Hospitals
Laundries
Mobile Home Parks
Motels and Hotels
Nursing and Rest Homes
Office Buildings
Restaurants
Schools

Hellenbrand

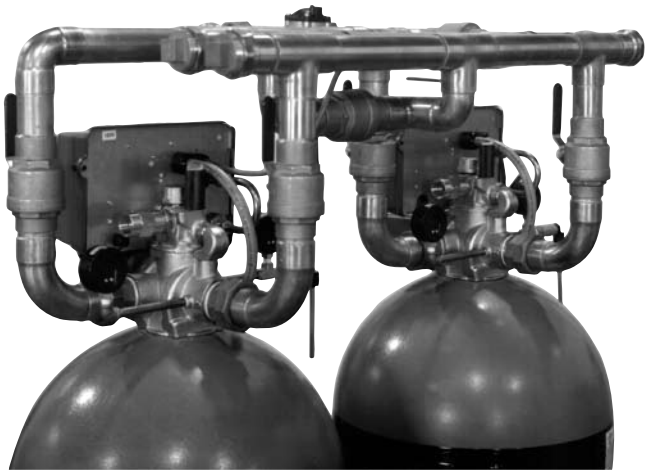
Hellenbrand Means Quality and Reliability

The only Waunakee in the world, a village of nearly 9,000 people in South Central Wisconsin, is the home of Hellenbrand Water Conditioners, Inc. Waunakee, an Indian name that means “Peaceful Valley”, is the ideal setting for a company with a neighborly, small-town concern for its customers and dealers. Since it opened its doors in 1967, Hellenbrand has offered something you rarely find anywhere today – well designed, quality products backed up with fast, reliable service. Here are several important benefits that go into Hellenbrand TN2 Series Conditioners.

TN2 Series Conditioners use a top-mounted, two-inch inlet and outlet solid brass valve with a motor-driven, time-tested, hydraulically-balanced piston, seal and spacer concept to pilot service flow not dependent on water pressure. No diaphragms to rupture or false transfer, ever. It’s clean, direct-operating, and reliable. It will give you up to 80 gpm hard water by-pass during regeneration, or you may have the optional “no hard water by-pass piston” for twin or multiple systems. The high service flow rates and simplified alternating or multiple lockout systems eliminate the need for diaphragms, solenoids, stagers, and side openings on mineral tanks. They have factory-wired electrical systems to assure easy installation. The TN2 Series offers you a choice of either mechanical or microprocessor meter demand systems, available in 1”, 1.5” or 2”, depending on the application.

TN2 “NXT” Microprocessor System

Optional Twin Alternating Pre-Pipe Manifold



TN2 Series Control Valve - Two Inch Inlet/Outlet

1. Stainless steel backplate will not rust or corrode.
2. Factory installed drain line flow control maintains accurate backwash rates.
3. Two-inch NPT inlet/outlet connections.
4. Solid brass valve assures durability and long life.
5. Hydraulically-balanced piston, seal, and spacers. Lower service piston is available with or without hard water by-pass. Non-sticking teflon-coated pistons allow foreign particles to pass through without damaging the unit.
6. Upper piston pilots the regeneration steps of backwash, brine and slow rinse, fast rinse, and brine tank refill.
7. Separate “time-fill” brining with accurate flow controls allows automatic brine tank refill. Brine tank refill rates are easily adjustable. No need to worry about adjusting float valves or repositioning brine plugs for salt measurements.
8. Heavy-duty drive motor receives signal from timer to efficiently direct water flow during regeneration. Piston shifts smoothly and quietly regardless of water pressure.
9. Lower heavy-duty drive motor receives signal from upper drive motor to direct the service piston into position. Piston shifts smoothly and quietly regardless of water pressure.
10. Optional microprocessor provides meter demand regeneration with adjustable regeneration times for all cycles, time of regeneration and calendar day override. Mechanical timers also available in time clock or meter demand.
11. Flow director on meter demand systems accurately directs flow towards turbine meter under low flow conditions.
12. Environmental cover is standard on all systems. Nema 3R rated.

TN2 Standard System Design Options

(for more specific information on the various system designs, contact your local Hellenbrand representative or go to: www.hellenbrand.com

1. **Single Tank Systems - XT Controller**
   - Time Clock
   - XT Controller Electronic Meter Demand
2. **Twin, Tri-Plex & Four-Plex Systems - 3200NXT Controller**

   Parallel Operation
   - 2-4 Units
   - Individual Meters
   - Single or Individual Brine Systems

   Alternating Operation
   - 2-4 Units
   - Twin Systems - One Meter or Two Meters
   - Tri-Plex & Four-Plex Systems - Individual Meters
   - Single or Individual Brine Systems
3. **Twin, Tri-Plex & Four-Plex Demand Recall Progressive Systems - 3214NXT Controller**
   - 2-4 Units
   - Individual Meters
   - Single or Individual Brine Systems

3200NXT Electronic Controller

The 3200NXT Network Controller uses on-board communications capabilities to link multiple valves (via off-the shelf CAT3, CAT5, or better cables) for a variety of multiple system types as described above.

Program Features:

- 2x16 character backlit LCD display
- Networks up to four units
- Auxiliary inputs and outputs
  - Remote signal start input
  - Remote lockout input
  - Programmable relay output/chemical pump output
- Easy installation with plug-in wiring harnesses
- Front panel diagnostics button
  - Flow rate
  - Peak flow rate
  - Totalizer
  - Hours between last two regenerations.
  - Hours since last regeneration
  - Adjustable volume remaining
  - Valve position

Three programming levels

- User mode
- Master programming
- Diagnostics mode

Note: The 3214NXT Demand Flow Network Controller is used for demand recall applications.

3214NXT Demand Flow Network Controller

The 3214NXT Demand Flow Network Controller can be programmed to bring multiple units to the service position and back to standby based on system demand flow. The 3214NXZT Demand Flow Network Controller used on-board communication capabilities to link multiple valves via standard CAT3, CAT5, or better communication cables.

Program Features:

- Network two to four valves
- Simple, on-site network programming
- Easy installation with plug-in wiring harnesses
- Shift key allows digit selecting in programming
- 2x16 character LCD backlit display (letter or digit codes not needed)
- Valve, piston, and cam type default storage
- User and master programming modes
- Diagnostic mode:
  - Current flow rate
  - Peak flow rate (can be reset)
  - Totalizer (can be reset)
  - Hours between last two regenerations
  - Hours since last regeneration
  - Volume remaining (adjustable)
  - Valve addresses

Three programming levels

- User mode
- Master programming
- Diagnostics mode

Mechanical or Electronic Meter/Turbine Options:

Size	Flow Ranges	Accuracy
1.5” CC Meter	0.5 – 60 GPM	±5%
2” CC Meter	1.5 - 150 GPM	±5%

TN2 Physical Specifications

MODEL	MINERAL TANK (INCHES)	RECOMMENDED BRINE TANK (INCHES)	DRY SALT STORAGE LBS	APPROXIMATE SHIPPING WEIGHT POUNDS		WATER METER SIZE RECOMM.
				SINGLE	TWIN	
TN2-60	13 x 54	18 x 40	330	265	490	1" or 1-1/2"
TN2-90	14 x 65	18 x 40	300	320	600	1" or 1-1/2"
TN2-120	16 x 65	24 x 41	640	425	810	1-1/2" or 2"
TN2-150-18	18 x 65	24 x 50	750	525	1005	1-1/2" or 2"
TN2-150-21	21 x 62	24 x 50	750	555	1065	1-1/2" or 2"
TN2-180-18	18 x 65	24 x 50	750	580	1115	1-1/2" or 2"
TN2-180-21	21 x 62	24 x 50	750	610	1175	1-1/2" or 2"
TN2-210	21 x 62	24 x 50	710	665	1280	1-1/2" or 2"
TN2-240	24 x 72	24 x 50	680	775	1505	2"
TN2-270	24 x 72	30 x 50	1110	830	1615	2"
TN2-300	24 x 72	30 x 50	1110	880	1715	2"
TN2-300-30	30 x 72	30 x 50	1110	1035	2025	2"
TN2-450	30 x 72	39 x 48	2080	1360	2835	2"
TN2-600	36 x 72	39 x 48	1640	1825	3920	2"

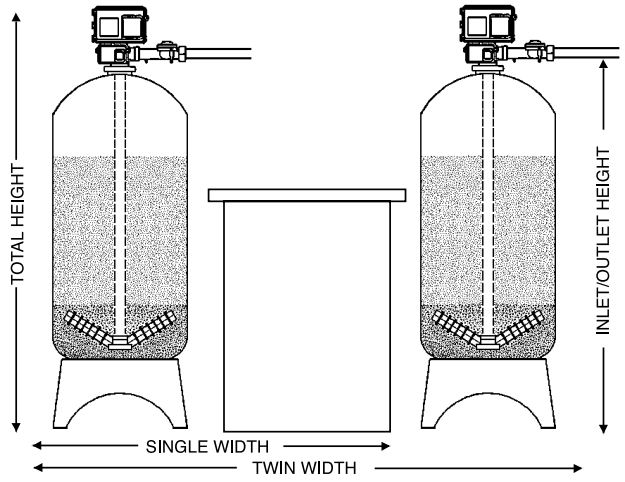
TN2 Capacity Ratings

MODEL	RESIN CU.FT.	LOW SALT GRAINS @ LBS.	MEDIUM SALT GRAINS @ LBS.	RATED CAPACITY HIGH SALT GRAINS @ LBS.	CONT. GPM 15 PSI	PEAK GPM 25 PSI	BKW RATE GPM
TN2-60	2	38,000 @ 12	56,000 @ 20	64,000 @ 30	40	56	3.5
TN2-90	3	57,000 @ 18	84,000 @ 30	96,000 @ 45	39	54	4.0
TN2-120	4	76,000 @ 24	112,000 @ 40	128,000 @ 60	47	64	5.0
TN2-150-18	5	95,000 @ 30	140,000 @ 50	160,000 @ 75	51	68	7.0
TN2-150-21	5	95,000 @ 30	140,000 @ 50	160,000 @ 75	67	85	9.0
TN2-180-18	6	114,000 @ 36	168,000 @ 60	192,000 @ 90	50	67	7.0
TN2-180-21	6	114,000 @ 36	168,000 @ 60	192,000 @ 90	63	81	9.0
TN2-210	7	133,000 @ 42	196,000 @ 70	224,000 @ 105	60	77	9.0
TN2-240	8	152,000 @ 48	224,000 @ 80	256,000 @ 120	74	97	12.0
TN2-270	9	171,000 @ 54	252,000 @ 90	288,000 @ 135	71	94	12.0
TN2-300	10	190,000 @ 60	280,000 @ 100	320,000 @ 150	68	91	12.0
TN2-300-30	10	190,000 @ 60	280,000 @ 100	320,000 @ 150	84	105	20.0
TN2-450	15	285,000 @ 90	420,000 @ 150	480,000 @ 225	84	105	20.0
TN2-600	20	380,000 @ 120	560,000 @ 200	640,000 @ 300	87	110	25.0

OPERATING CONDITIONS

Product improvement designs are subject to change without notice.

1. Water Pressure 30 - 100 psi.
2. Water temperature is not to exceed 110ºF and the unit cannot be subject to freezing conditions. Consult factory for higher water temperature application.
3. Limit of 2 ppm of ferrous iron. Add 3 grains per gallon of hardness for each ppm of iron present.
4. Flex connectors and vacuum breakers are required for certain size systems and/or applications. Consult factory for details.
5. Backwash flow rates are calculated at 4 gpm per sq. ft. of bed area and rounded off based on 50ºF water temperature.



TN2 Dimensions

MODEL	SYSTEM HEIGHT* (INCHES)	IN/OUT HEIGHT* (INCHES)	WIDTH SINGLE INCHES	WIDTH TWIN INCHES
TN2-60	68	57.5	34	50
TN2-90	78.5	68	35	52
TN2-120	79	68	43	62
TN2-150-18	80.5	70	45	66
TN2-150-21	80.5	70	49	74
TN2-180-18	80.5	70	45	66
TN2-180-21	80.5	70	49	74
TN2-210	80.5	70	49	74
TN2-240	88	77.5	51	78
TN2-270	88	77.5	57	84
TN2-300-24	88	77.5	57	84
TN2-300-30	91	80.5	63	96
TN2-450	91	80.5	72	105
TN2-600	91.5	81	78	117

*Allow an additional 12" for resin loading. All dimensions are ± 1" and are subject to change without notice.

DEALER NAME:

Hellenbrand

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MEMBER Water Quality ASSOCIATION

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